Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1.   (Currently Amended)   A   method   for   synchronizing between a~~ plurality of~~ base stations in a telecommunications system which includes a plurality of cells, each of which cells has one of ~~the plurality~~ said of base stations   and at least one mobile station situated therein, the method comprising:

a)   providing at least one channel comprising time slots, for usage in the plurality of cells;

b)   each base station transmitting a synchronization signal, in a given one of the at least one channel, ~~the transmission being from each of the plurality of base stations~~ to remaining base stations within transmission range of each respective base station;

c)   for each base station, calculating respective time differences between corresponding time slots transmitted by the respective base station and

received from the respective other base stations within transmission range of the

base station; and

d)   adjusting timing of the synchronization signals of the respective

base station according to calculated time differences;

wherein the given one of the at least one channel, by which the

synchronization signal is transmitted from each of the plurality of base stations

to said remaining base stations, is a random access channel transmitted at a

frequency within a band of frequencies that is provided for communications

between [[with]] mobile stations and base stations.

Claim 2.   (Previously Presented)   The method according to Claim 1,

comprising:

e)   for each of the plurality of base stations, reporting the time differences

calculated in step c) to a radio network controller;

f)   calculating a synchronizing adjustment corresponding to each base

station from the reported time differences;

g)   informing each base station individually of the corresponding synchronizing adjustment calculated in step f); and

h)   synchronizing each base station according to the corresponding synchronizing adjustment.

Claim 3.   (Previously Presented)   The method according to Claim 1, further comprising:

i) each respective base station acting autonomously on the time differences calculated in step c) by adjusting its synchronization to minimize the time differences.

Claim 4.   (Cancelled)

Claim 5.   (Previously Presented)   The method according to Claim 1, wherein the random access channel comprises a time slot per TDMA frame.

Claim 6.   (Previously Presented)   The method according to Claim 5, wherein the random access channel is allocated to uplink transmissions in order to initiate communications.

Claim 7.   (Previously Presented)   The   method according to Claim 6, wherein communications are initiated by requesting a resource unit for uplink usage.

Claim 8.   (Previously Presented)   The method according to Claim 5, further comprising:

j) allocating utilization of each random access channel time slot for base station synchronization according to a schedule.

Claim 9.   (Previously Presented)   The method according to Claim 5, further comprising:

k)   using a second channel of said at least one channel to silence uplink communications   in   the   random   access   channel   time   slots   to   allow   the transmission of synchronization transmissions from each respective base station to other base stations.

Claim 10.   (Previously Presented)   The method according to Claim 9, wherein the second channel is a broadcast control channel.

Claim 11.   (Previously Presented) The method according to Claim 1, wherein the random access channel time slot used is always contained in a fixed

numbered frame within a plurality of multi-frames in order to synchronize the plurality of base stations over multi-frames.

Claim 12.   (Currently Amended) A method of locating a mobile station within a telecommunications cell forming part of a telecommunications system [[wich]] which includes a base station and at least one mobile station, the method comprising:

determining the location of at least three base stations;

scheduling synchronization measurements for each of the base stations utilizing a random access channel;

transmitting a signal from the mobile station;

receiving the transmitted signal at each of the three base stations;

comparing the received signals with timing signals in each of the base stations; and

using the comparison at each base station to determine the location of the mobile station.